ABSTRACT

A system for transporting voice, video and data signals in the local access loop between a central office location and a plurality of subscribers is provided. The claimed system includes optical video distribution circuitry for combining analog television signals and digital television signals into combined optical video signals at a first wavelength; telephony/data distribution circuitry for combining telephony packet signals and data packet signals into combined optical telephony/data packet signals at a second wavelength; optical multiplexing circuitry for combining the combined optical video signals with the combined optical telephony/data packet signals to form downstream multiplexed optical signals; a passive optical network for transporting the downstream multiplexed optical signals to the subscribers; and a plurality of home network units coupled to the passive optical network for receiving the downstream multiplexed optical signals, and for transmitting combined optical telephony/data packet signals over the passive optical network to the central office at the second wavelength.